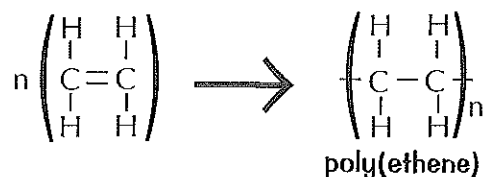


Using Alkenes to Make Polymers

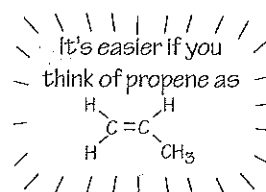
Q1 The equation below shows a polymerisation reaction to form **poly(ethene)**.



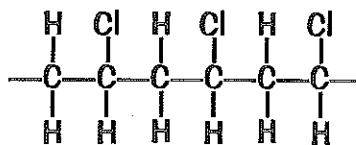
a) What is the name of the monomer used to form poly(ethene)?

.....

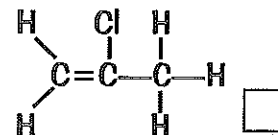
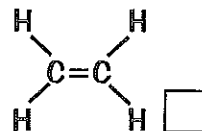
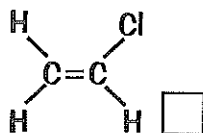
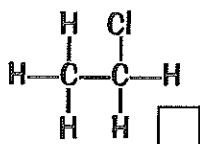
b) Draw a similar equation below to show the polymerisation of propene (C_3H_6).



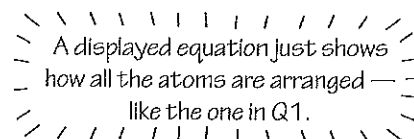
Q2 The diagram shows part of the chain of a **poly(chloroethene)** (PVC) molecule.



a) Which of these formulae represents the monomer used to make PVC? Tick one box.



b) Write a displayed equation to show the formation of PVC.



Q3 Draw lines to match up each **polymer** to its use.

Poly(ethene)

Non-stick coating for pans

Poly(propene)

Clothing, electric cables and pipes

Poly(chloroethene), PVC

Plastic bags

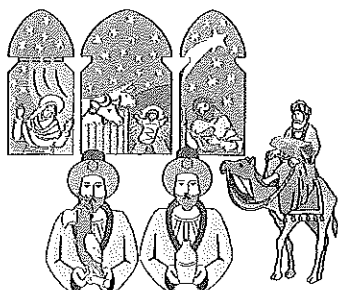
PTFE

Carpets, thermal underwear and plastic containers

Using Alkenes to Make Polymers

- Q4** Fractional distillation of crude oil produces useful fractions and not-so-useful fractions. The not-so-useful ones are **cracked** to form alkenes. Alkenes can be **polymerised** to make plastics.

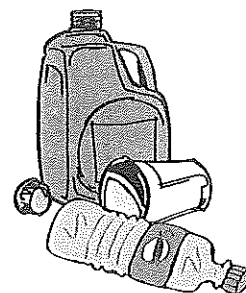
Write down the differences between cracking and polymerisation.



We bring you gold, frankincense...
and poly-myrrh

- Q5** Most polymers are **not** biodegradable.

If something's biodegradable it can rot.



- a) What problems does this cause for the environment?

.....

.....

- b) What is the problem with burning polymers to dispose of them?

.....

- c) Give **two** problems with recycling polymers.

1.

2.

- d) Scientists are working on making biodegradable materials from genetically modified plants. Suggest why tests need to be carried out to find out what happens when the polymer breaks down.

.....

.....

Top Tips:

Sorry, but **polymers** are all over the blooming place, so you're going to have to be clued up about them. It's really no biggie though, because if you think about it, they're just glorified daisy chains. A bunch of silly hydrogen and carbon atoms standing around holding hands with each other — maybe with some chlorine or something as well. What a load of fuss for a plastic cup.